

REMARKS

By the present amendment, claims 1, 5, and 7 have been amended and claims 2-4, 6 and 8-10 stand as originally filed. Support for the amendment to claim 1 can be found, for example, in the paragraph beginning on page 8, line 22. Moreover, amendments to the specification and claims 5 and 7 were made to correct typographical errors. Accordingly, claims 1-10 remain pending in this application and do not involve the introduction of new matter. Applicant respectfully requests reconsideration and allowance.

The Examiner rejects claims 1 and 8-10 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,739,737 to Hatton (hereinafter Hatton) in view of U.S. Patent No. 6,259,170, to Limoge et al. (hereinafter Limoge et al.). The Examiner further rejects claims 2 and 4-6 under 35 U.S.C. § 103(a) as being unpatentable over Hatton in view of Limoge et al. as applied to claim 1, and further in view of U.S. Patent No. 4,782,301 to Dohi et al. The Examiner also rejects claims 3 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Hatton in view of Limoge et al. as applied to claims 1 and 2 and further in view of U.S. Patent No. 6,278,919 to Hwang et al. Applicant respectfully traverses these rejections for exemplary reasons stated below.

Claim 1 of the present application recites:

A compact fuse holder for an automobile which comprises: a small plate including at least two protective circuits, each one of them comprises a **resettable fuse** consisting in a **positive temperature coefficient element (PTC)** connected to two terminals, being each pair of terminals of each of the protective devices connected to a light signal generating circuit, wherein each protective circuit presents two input and output connectors, and such each pair of terminals are additionally connected to a sole second light signal, **wherein a polymeric material is formed with the small plate, the protective circuits including the resettable fuses each consisting in the positive temperature coefficient element (PTC), and the light signal generating circuits to form an integrated assembly.** (emphasis added).

Claim 1 requires a **resettable fuse** consisting in a **positive temperature coefficient element (PCT)**. As stated, for example, on page 6, lines 21-24 of the specification, these resettable fuses can interrupt current flow when reaching a certain temperature and thereafter

reset to reinstate the connection when the resettable fuse cools down and after the damaged element at issue is repaired. Moreover, claim 1 further sets forth that a polymeric material is formed with the small plate, the protective circuits including the resettable fuses each consisting in the positive temperature coefficient element (PTC), and the light signal generating circuits to form an integrated assembly. For example, as discussed in the paragraph beginning on page 8, line 22, a suitable mold may be used wherein a polymeric material is injected, molded or slipped in to form an integrated assembly. Providing an integrated assembly prevents the PTC elements from being modified, exchanged or bypassed.

In light of the disclosure it is clear that the “compact” fuse holder recited in claim 1 means a solid, single piece, closely packed holder and that “small plate” recited in claim 1 is referring to a circuit board array, with all operating basics, including the positive temperature coefficient (PTC) elements, being permanently enclosed and sealed into a solid protecting integrated assembly. It is therefore impossible to tamper with or manipulate the PTC elements since the elements are permanently enclosed and sealed into a solid protecting integrated assembly. Further, the “compact fuse holder”, as recited in claim 1, not only avoids undesirable effects from the environment, but also prevents any voluntary or accidental intervention on PTC protecting elements. In this way, a user may not intentionally or inadvertently bypass the protective nature of the PTC elements. Indeed, as the PTC element is permanently enclosed and sealed into a solid protecting integrated assembly, a user may not remove or replace the PTC element from the integrated assembly. Therefore, it is not possible to exchange one PTC element with another that might have an improper wattage designation. Moreover, it is not possible to otherwise close the circuit to intentionally bypass a damaged PTC element. Rather, the recited compact fuse holder provides for a resettable fuse that is exclusively automatically reset when the vehicle system is repaired and cannot be manually tampered with, manually reset, replaced or evaded. It is further appreciated that the claimed compact fuse holder provides an efficient and reliable protector of low cost and easy installation.

In sharp contrast, Hatton fails to disclose a resettable fuse consisting in a positive temperature coefficient element (PCT) as required by claim 1. Moreover, Hatton fails to

disclose a polymeric material formed with the small plate, the protective circuits including the resettable fuses each consisting in the positive temperature coefficient element (PTC), and the light signal generating circuits to form an integrated assembly as further required by claim 1.

Rather, Hatton discloses a “blown fuse indicator” that only incorporates regular burn-out resistance fuses that are not resettable. Indeed, Hatton states that the fuses include an electrical resistance strip that “burns out” to create an open circuit to thereby cut off the flow of electricity to a system component if the flow of electricity through the fuse exceeds a predetermined level. See column 4, lines 31-36 of Hatton. In order to reinstate the circuit, the ruined burn-out fuse must be removed and replaced with a new working burn-out fuse. See column 4, lines 61-63 of Hatton. Consequently, Hatton further fails to disclose a polymeric material formed with the small plate, the resettable fuses and the light signal generating circuits to form an integrated assembly. Indeed, Hatton only discloses removable fuses that are not part of an integrated assembly. Hatton therefore only teaches a blown fuse indicator incorporating a burn-out fuse and does not teach or suggest use of a resettable fuse as required by claim 1 of the present application. Moreover, Hatton only teaches removable fuses that are not provided in an integrated assembly.

The Examiner admits that Hatton fails to disclose the fuse comprising a positive temperature coefficient element (PCT) but argues that it would have been obvious to one having ordinary skill in the art at the time the invention was made to use PCT in the device, as taught by Limoge et al., to utilize advantages of the resettable fuse of new technology. Applicant respectfully traverses this assertion. In fact, Hatton teaches away from incorporating a polymeric positive temperature coefficient resettable fuse and any such incorporation would necessarily destroy the teachings of Hatton. Hatton suggests use of an indicator to identify a blown fuse to permit location and replacement of the blown fuse. (e.g., see column 1, lines 5-8; and column 5, lines 42-44). In contrast, the resettable fuse of Limoge et al. does not require fuse replacement and does not identify a fuse for replacement. The proposed modification would necessarily destroy the teachings of Hatton since incorporating the resettable fuse of Limoge et al. would defeat the purpose of using an indicator to locate a burned out fuse for replacement as set forth by Hatton.

Moreover, the combination of references recited by the Examiner fails to include every limitation recited in claim 1. Specifically, Hatton in view of Limoge et al. fails to disclose a polymeric material formed with the small plate, the protective circuits including the resettable fuses each consisting in the positive temperature coefficient element (PTC), and the light signal generating circuits to form an integrated assembly as required by claim 1. Limoge et al. describes the encasing of LED in cast acrylic. (See column 7, lines 15 and 20 of Limoge et al.). Limoge et al. further describes the circuit protection devices (44, 46, 48) simply being encased in the plastic casing (74). (See column 7, lines 21-22). A “casing” is understood to be an outer layer, box or container, which does not address or imply advantages of the claimed invention; namely, to avoid any intervention on the protecting devices with a plate enclosed in a polymer material to form an integrated assembly.

As Hatton in view of Limoge et al. fail to teach or suggest the above-referenced limitations set forth in claim 1, Applicant respectfully requests withdrawal of the corresponding rejection and allowance of the application. Applicant further requests withdrawal of the rejections of claims 2-10 as depending directly or indirectly from claim 1 which is believed to be allowable for exemplary reasons set forth above.

Claims 2-10 are also believed to include further distinctive elements not taught or suggested by the cited references. For example, claim 2 recites “such sole second light signal is located on the small plate” (emphasis added). Dohi et al. discloses a fuse inspection device to successively sense each fuse condition with a handheld slide knob having an LED. No integrated assembly including the small plate with the sole second light signal located on the small plate is revealed. Rather, Dohi et al. suggests a light emitting means connected sequentially to each one of the fuses to test its condition. Hatton in view of Limoge et al. in further view of Dohi et al., therefore fails to teach or suggest the sole second light signal located on the small plate in combination with the limitations required by claim 1. Accordingly, Applicant respectfully requests withdrawal the rejection corresponding to claims 2 and 4-6 for this additional reason.

Claim 10 recites that the input and output connectors of each protective circuit are all male, all female, or male for the input and female for the output, or viceversa. These

limitations are not believed to be taught or suggested by Hatton in view of Limoge.

Applicant therefore respectfully further requests allowance of claim 10 for this additional reason.

In addition, claim 3 requires the sole second light signal to be installed in the vehicle dashboard. Claim 7 requires an audible signal generating circuit to be installed on the vehicle dashboard. In contrast, Hwang et al. discloses an element (140) located in the dashboard. In the specification, element (140) is identified as an operation switch to be turned on when speaker operation is decided (col. 9, lines 38-45). Neither Hwang et al., Hatton, Limoge et al. nor Dohi provide any teaching or suggestion of locating a second light signal or an audible signal generating circuit in the vehicle dashboard as respectively set forth above. Applicant therefore further respectfully requests allowance of claims 3 and 7 for this additional reason.

Additionally, the applicant respectfully wish to call the attention on the fact that instant application refers to a novel and nonobvious compact fuse holder that incorporates a resettable fuse consisting in a positive temperature coefficient element (PTC) and a light signal generating circuit. The Applicant respectfully asserts that the claims of the instant application are neither taught nor suggested by the cited references.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

Appl. No. 10/734,519
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Reply to Office action of March 21, 2005

It is believed no additional fees are required for this amendment. However, if any additional fees are due, please charge same to Deposit Account No. 16-0820, our Order No. 35346.

Respectfully submitted,
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